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## NOTICE OF ALLOWANCE AND FEE(S) DUE

45216 7590 06/02/2008

Kunzler & McKenzie  
8 EAST BROADWAY  
SUITE 600  
SALT LAKE CITY, UT 84111

EXAMINER

HO, BINH VAN

ART UNIT

PAPER NUMBER

2163

DATE MAILED: 06/02/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,609	03/01/2004	Anthony Steve Pearson	SJ0920030089US1	9579

TITLE OF INVENTION: APPARATUS, SYSTEM, AND METHOD FOR MANAGING MULTIPLE COPY VERSIONS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1440	\$300	\$0	\$1740	09/02/2008

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

## HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

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B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

**PART B - FEE(S) TRANSMITTAL**

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**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

45216 7590 06/02/2008

Kunzler & McKenzie  
8 EAST BROADWAY  
SUITE 600  
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**Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)

(Signature)

(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,609	03/01/2004	Anthony Steve Pearson	SJ0920030089US1	9579

TITLE OF INVENTION: APPARATUS, SYSTEM, AND METHOD FOR MANAGING MULTIPLE COPY VERSIONS

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nonprovisional	NO	\$1440	\$300	\$0	\$1740	09/02/2008

EXAMINER	ART UNIT	CLASS-SUBCLASS
HO, BINH VAN	2163	707-203000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

"Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 \_\_\_\_\_  
2 \_\_\_\_\_  
3 \_\_\_\_\_

## 3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY AND STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent):  Individual  Corporation or other private group entity  Government

## 4a. The following fee(s) are submitted:

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- Issue Fee
- A check is enclosed.
- Publication Fee (No small entity discount permitted)
- Payment by credit card. Form PTO-2038 is attached.
- Advance Order - # of Copies \_\_\_\_\_
- The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

## 5. Change in Entity Status (from status indicated above)

a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_

Date \_\_\_\_\_

Typed or printed name \_\_\_\_\_

Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS; SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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10/790,609	03/01/2004	Anthony Steve Pearson	SJO920030089US1	9579
45216	7590	06/02/2008		
Kunzler & McKenzie 8 EAST BROADWAY SUITE 600 SALT LAKE CITY, UT 84111				EXAMINER HO, BINH VAN
				ART UNIT 2163 PAPER NUMBER DATE MAILED: 06/02/2008

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 506 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 506 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

<b>Notice of Allowability</b>	<b>Application No.</b> 10/790,609	<b>Applicant(s)</b> PEARSON ET AL.
	<b>Examiner</b> BINH V. HO	<b>Art Unit</b> 2163

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTO-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to 02/19/2008.

2.  The allowed claim(s) is/are 1,8-20 and 27-32.

3.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)  All b)  Some\* c)  None of the:

1.  Certified copies of the priority documents have been received.

2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.

(a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached  
1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.

(b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of  
Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1.  Notice of References Cited (PTO-892)

5.  Notice of Informal Patent Application

2.  Notice of Draftsperson's Patent Drawing Review (PTO-948)

6.  Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.

3.  Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_.

7.  Examiner's Amendment/Comment

4.  Examiner's Comment Regarding Requirement for Deposit  
of Biological Material

8.  Examiner's Statement of Reasons for Allowance

9.  Other \_\_\_\_\_.

**DETAILED ACTION**

**Examiner's Amendment**

1. An examiner's amendment to the record appears below. Should the changes and /or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.3.12. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
2. The following claim has been amended upon agreement by applicant during a telephone conversation with Mr. Scott Thorpe on 05/09/2008.

Amendments to claims 1, 8, 11, 17, 20, and 30-32; claims 5-7 and 24-26 are cancelled:

Claim 1 (Currently Amended):

An apparatus for managing multiple copy versions of a source volume, the apparatus comprising: a replication record management module comprising executable code stored on a semiconductor device, executed by a processor, and configured to maintain a current replication record descriptive of a current copy version of a source volume and comprising a time, a copy version, and at least one copy pair, and maintain a previous replication record descriptive of a previous copy version; a pre-pairing module comprising executable code stored on the semiconductor device, executed by the processor, and configured to create a future pre-pairing record descriptive of a future copy version of the source volume and comprising a time, a copy version, and at least one copy pair;

a pre-pairing record management module configured to maintain [[a]]the future pre-pairing record descriptive of a future copy version of the source volume and comprising a time, a copy version, and at least one copy pair and a previous pre-pairing record descriptive of a previous copy version;

a copy record module comprising executable code stored on the semiconductor device, executed by the processor, and configured to create a copy record from a pre-copy record, the pre-copy record comprising the future pre-pairing record if the future pre-pairing record exists else comprising the current replication record;

a replication module comprising executable code stored on the semiconductor device, executed by the processor, and configured to replicate the source volume on a target volume, create a new copy version of the source volume according to the copy record, and establish a new replication record descriptive of the new copy version of the source volume; and

the replication record management module is further configured to compare the new replication record to the current replication record and to break a copy pair for a removed source volume present in the current replication record, but not present in the new replication record.

Claim 5 (Cancelled)

Claim 6 (Cancelled)

Claim 7 (Cancelled)

Claim 8 (Currently Amended)

The apparatus of claim 1, further comprising a target selection module comprising executable code stored on the semiconductor device, executed by the processor, and configured to locate a target volume available for use to create a copy version of the source volume.

Claim 11 (Currently Amended)

An apparatus for managing multiple copy versions of a source volume, the apparatus comprising:

a replication record management module comprising executable code stored on a semiconductor device, executed by a processor, and configured to maintain a plurality of replication records, each replication record descriptive of a copy version of a source volume, the replication records comprising a current replication record and a previous replication record descriptive of a previous copy version, the replication records comprising a time, a copy version, and at least one copy pair,;

a pre-pairing module comprising executable code stored on the semiconductor device, executed by the processor, and configured to create a future pre-pairing record descriptive of a future copy version of the source volume and comprising a time, a copy version, and at least one copy pair;

a pre-pairing record management module comprising executable code stored on the semiconductor device, executed by the processor, and configured to maintain a

plurality of pre-pairing records, each pre-pairing record descriptive of a copy version of the source volume, the pre-pairing records comprising the future pre-pairing record and a previous pre-pairing record descriptive of a previous copy version;

a copy record module comprising executable code stored on the semiconductor device, executed by the processor, and configured to create a copy record from a pre-copy record, the pre-copy record comprising the future pre-pairing record if the future pre-pairing record exists else comprising the current replication record;

a replication module comprising executable code stored on the semiconductor device, executed by the processor, and configured to replicate the source volume on a target volume, create a new copy version of the source volume according to the copy record, and establish a new replication record descriptive of the new copy version of the source volume;

the replication record management module is further configured to compare the new replication record to the current replication record and to break a copy pair for a removed source volume present in the current replication record, but not present in the new replication record; and

a record management module comprising executable code stored on the semiconductor device, executed by the processor, and configured to dynamically manage the plurality of replication records and pre-pairing records in response to a change in the data copy environment.

Claim 17 (Currently Amended)

A system for managing multiple copy versions of a source volume, the system comprising:

a storage subsystem configured to store backup data;

a backup manager comprising executable code stored on a semiconductor device, executed by a processor, and configured to direct the storage subsystem to create a plurality of copy versions from a plurality of source volumes and to store backup information descriptive of each of the plurality of copy versions;

a backup management apparatus configured to manage the plurality of copy versions and the backup information descriptive of each of the plurality of copy versions;

a replication record management module comprising executable code stored on the semiconductor device, executed by the processor, and configured to maintain a current replication record descriptive of a current copy version of a source volume, and maintain a previous replication record descriptive of a previous copy version;

a pre-pairing module comprising executable code stored on the semiconductor device, executed by the processor, and configured to create a future pre-pairing record descriptive of a future copy version of the source volume and comprising a time, a copy version, and at least one copy pair;

a pre-pairing record management module comprising executable code stored on the semiconductor device, executed by the processor, and configured to maintain [[a]]the future pre-pairing record descriptive of a future copy version of the source volume and a previous pre-pairing record descriptive of a previous copy version; and

a copy record module comprising executable code stored on the semiconductor device, executed by the processor, and configured to create a copy record from a pre-copy record, the pre-copy record comprising the future pre-pairing record if the future pre-pairing record exists else comprising the current replication record;

a replication module comprising executable code stored on the semiconductor device, executed by the processor, and configured to replicate the source volume on a target volume, create a new copy version of the source volume according to the copy record, and establish a new replication record descriptive of the new copy version of the source volume; and

the replication record management module is further configured to compare the new replication record to the current replication record and to break a copy pair for a removed source volume present in the current replication record, but not present in the new replication record.

#### Claim 20 (Currently Amended)

A computer readable storage medium comprising computer readable code configured to carry out a method for managing multiple copy versions of a source volume, the method comprising:

maintaining a current replication record descriptive of a current copy version of a source volume;

maintaining a previous replication record descriptive of a previous copy version;

creating a future pre-pairing record descriptive of a future copy version of the source volume and comprising a time, a copy version, and at least one copy pair;  
maintaining [[a]]the future pre-pairing record descriptive of a future copy version of the source volume;  
maintaining a previous pre-pairing record descriptive of a previous copy version;  
creating a copy record from a pre-copy record, the pre-copy record comprising the future pre-pairing record if the future pre-pairing record exists else comprising the current replication record;  
replicating the source volume on a target volume, creating a new copy version of the source volume according to the copy record;  
establishing a new replication record descriptive of the new copy version of the source volume;  
comparing the new replication record to the current replication record; and  
breaking a copy pair for a removed source volume present in the current replication record, but not present in the new replication record.

Claim 24 (Cancelled)

Claim 25 (Cancelled)

Claim 26 (Cancelled)

Claim 30 (Currently Amended)

A method for managing multiple copy versions of a source volume, the method comprising:

maintaining a current replication record descriptive of a current copy version of a source volume;

maintaining a previous replication record descriptive of a previous copy version; creating a future pre-pairing record descriptive of a future copy version of the source volume and comprising a time, a copy version, and at least one copy pair;

maintaining ~~[[a]]the future pre-pairing record descriptive of a future copy version of the source volume;~~

maintaining a previous pre-pairing record descriptive of a previous copy version; creating a copy record from a pre-copy record, the pre-copy record comprising the future pre-pairing record if the future pre-pairing record exists else comprising the current replication record;

replicating the source volume on a target volume, creating a new copy version of the source volume according to the copy record;

establishing a new replication record descriptive of the new copy version of the source volume;

comparing the new replication record to the current replication record; and breaking a copy pair for a removed source volume present in the current replication record, but not present in the new replication record.

Claim 31 (Currently Amended)

A method for managing multiple copy versions of a source volume, the method comprising:

maintaining a current replication record descriptive of a current copy version of a source volume;

maintaining a previous replication record descriptive of a previous copy version;

creating a future pre-pairing record descriptive of a future copy version of the source volume and comprising a time, a copy version, and at least one copy pair;

~~maintaining [[a]]the future pre-pairing record descriptive of a future copy version of the source volume;~~

maintaining a previous pre-pairing record descriptive of a previous copy version;

creating a copy record from a pre-copy record, the pre-copy record comprising the future pre-pairing record if the future pre-pairing record exists else comprising the current replication record;

replicating the source volume on a target volume and create a new copy version of the source volume according to the copy record;

establishing a new replication record descriptive of the new copy version of the source volume;

maintaining a replication record descriptive of a previous copy version;

verifying the pre-copy record, accounting for a change in one of a source pool and a target pool;

replicating the source volume on a target volume, creating a new copy version of the source volume according to the copy record;

establishing a new replication record descriptive of the new copy version of the source volume;

comparing the new replication record to the current replication record; and

breaking a copy pair for a removed source volume present in the current replication record, but not present in the new replication record.

Claim 32 (Currently Amended)

An apparatus for managing multiple copy versions of a source volume, the apparatus comprising:

means for maintaining a current replication record descriptive of a current copy version of a source volume and maintaining a previous replication record descriptive of a previous copy version, the replication record maintaining means comprising executable code stored on a semiconductor device and executed by a processor;

means for creating a future pre-pairing record descriptive of a future copy version of the source volume and comprising a time, a copy version, and at least one copy pair, the pre-pairing record creating means comprising executable code stored on the semiconductor device and executed by the processor;

means for maintaining [[a]]the future pre-pairing record and a previous pre-pairing record descriptive of a previous copy versiondescriptive of a future copy version

Art Unit: 2163

of the source volume, the pre-pairing record maintaining means comprising executable code stored on the semiconductor device and executed by the processor;

means for creating a copy record from a pre-copy record, the pre-copy record comprising the future pre-pairing record if the future pre-pairing record exists else comprising the current replication record, the copy record creating means comprising executable code stored on the semiconductor device and executed by the processor;

means for replicating the source volume on a target volume, creating a new copy version of the source volume according to the copy record, the replicating means comprising executable code stored on the semiconductor device and executed by the processor;

means for establishing a new replication record descriptive of the new copy version of the source volume, the establishing means comprising executable code stored on the semiconductor device and executed by the processor;

means for comparing the new replication record to the current replication record, the comparing means comprising executable code stored on the semiconductor device and executed by the processor; and

means for breaking a copy pair for a removed source volume present in the current replication record, but not present in the new replication record, the breaking means comprising executable code stored on the semiconductor device and executed by the processor.

The Examiner's amendment has been made in order to place the application in a condition for allowance.

**Reasons for Allowance**

3. The following is an examiner's statement of reason for allowance:

Claims 1, 11, 17, 20, and 30-32 are considered allowable since the prior made of record and considered pertinent to the applicant's disclosure does not teach or suggest the claimed limitations. Ding (U.S. 6,978,282) or Leung (U.S. 5,937,343), taken individually or in combination, do not teach an apparatus for managing multiple copy versions of a source volume, the apparatus comprising a replication record management module comprising executable code stored on a semiconductor device, executed by a processor, and configured to maintain a current replication record descriptive of a current copy version of a source volume and comprising a time, a copy version, and at least one copy pair, and maintain a previous replication record descriptive of a previous copy version; a pre-pairing module configured to create a future pre-pairing record descriptive of a future copy version of the source volume and comprising a time, a copy version, and at least one copy pair; a copy record module configured to create a copy record from a pre-copy record, the pre-copy record comprising the future pre-pairing record if the future pre-pairing record exists else comprising the current replication record; a pre-pairing record management module configured to maintain the future pre-pairing record and a previous pre-pairing record descriptive of a previous copy version with a combination of all recitations as defined in claims 1, 11, 17, 20, and 30-32.

Therefore, claims 1, 8-20, and 27-32 are presently allowed.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

**Inquiry**

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh V. Ho whose telephone number is 571 272 8583. The examiner can normally be reached on M-F from 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don K. Wong can be reached on 571 272 1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Binh V Ho  
Examiner  
Art Unit 2163

/don wong/

Application/Control Number: 10/790,609  
Art Unit: 2163

Page 15

Supervisory Patent Examiner, Art  
Unit 2163